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The Modernist Exceptional Merits in The Architecture of Qahtan Al-Madfai

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Abstract

In the last two decades Modern architecture of the 20th century has become a primary focus for numerous global organizations, researchers, and academics who aim to preserve and sustain it. The leading parties in this endeavor are UNESCO and the International DOCOMOMO. They recognize modern heritage as tangible, authentic, carrying exceptional features and modern characteristics that reflect values, shifts, and norms of its era. Therefore, Docomomo has identified key Modernist Merits as criteria to assess the authenticity of this heritage, while UNESCO has listed many modern buildings and sites on the World Heritage List. In this respect many Iraqi modernist buildings suffer from mishandling and poor interest. Numerous have been distorted, demolished, or are on the verge of disappearing. This reflects a lack of understanding their exceptional modernist values which are worthy of preservation, and thus inefficiency in managing this heritage. Given that Intervention in modernist heritage involves adhering to guidelines set by international organization, the vague connection between criteria of DOCOMOMO and those of UNESCO clouds the process. Therefore, this article focuses on addressing the relationship between the two organizations' sets of criteria and clarifying their connection. The authors also aimed to address the national Iraqi context by assessing selected cases of modernist heritage buildings by one of Iraq's modernism pioneers, architect Qahtan Al-Madfai, against DOCOMOMO's criteria for modernist merits, highlighting the originality of Iraqi modernist heritage.

Using a descriptive analytical approach, the theoretical sections of the paper begin by exploring the principles and characteristics of modern architecture, followed by identifying the exceptional values of modernist buildings, defined by DOCOMOMO as Modernist Merits and linking them to UNESCO's criteria. The practical part includes an experts' survey to assess the Modernist Merits of the selected sample of Al- Madfaies' buildings.

The research results showed that Qahtaan Al-Madfai's architecture was distinguished by a high evaluation of two Merits (exceptional features): the technological feature and the artistic aesthetic feature. While the first was fairly preserved, the second feature was affected in some buildings as a result of the mismanagement of these buildings and the lack of awareness of their values.

Keywords: Modern Architecture, DOCOMOMO, Modernist Exceptional Merits, Iraqi Modern Architecture, Qahtaan Al-Madfai.

الميزات الحداثية الاستثنائية في عمارة قحطان المدفعي

علي سعدون السلطاني، صبا سامي العلي

الخلاصة:

على مدى العقدين الماضيين أصبحت عمارة القرن العشرين الحداثية محور اهتمام العديد من المنظمات العالمية والباحثين والأكاديميين الذين يهدفون إلى الحفاظ عليها واستدامتها. وعلى رأسها منظمة اليونسكو ومنظمة الدوكوموو الدولية. حيث تعترف المنظمتان بالتراث الحديث باعتباره ملموساً وأصيلاً ويحمل سمات استثنائية وخصائص حديثة تعكس قيم وتحولات ومعايير عصره. لذلك، حددت منظمة الدوكوموو سمات حداثية بارزة كمعايير لتقييم أصالة هذا التراث، بينما أدرجت اليونسكو العديد من المباني والمواقع الحديثة على قائمة التراث العالمي. في هذا الصدد، تعاني العديد من المباني الحديثة العراقية من سوء الإدارة وقلة الاهتمام، كما قد تم تشويه العديد منها أو هدمها أو على وشك الاختفاء. وهذا يعكس عدم

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فهم قيمها الحداثية الاستثنائية التي تستحق الحفاظ عليها، وبالتالي عدم الكفاءة في إدارة هذا التراث. ونظراً لأن التدخل في التراث الحديث يتضمن الالتزام بالمبادئ التوجيهية التي وضعتها المنظمات الدولية، فإن الارتباط الغامض بين معايير الدوكومومو ومعايير اليونسكو يصعب من هذه العملية. فيهدف هذا البحث إلى توضيح المعرفة بالخصائص الاستثنائية للعمارة الحديثة التي أعلنت عنها الدوكومومو وارتباطها بمعايير التراث العالمي التي وضعتها اليونسكو لغرض تحديد جوانب الأصالة في التراث. كما سعى المؤلفان إلى تناول الوضع الوطني العراقي لتقييمه بمعايير الدوكومومو من خلال حالات مختارة من المباني التراثية الحديثة لأحد رواد الحداثة في العراق، المعماري قحطان المدفعي، بهدف إبراز أصالة التراث العراقي الحديث.

وباستخدام المنهج التحليلي الوصفي، يكون الجانب النظري من البحث باستكشاف مبادئ وخصائص العمارة الحديثة، ثم تحديد القيم الاستثنائية للمباني الحديثة حسب دوكومومو وربطها بمعايير اليونسكو، يلي ذلك التعريف بالتراث الحداثي العراقي وتراث المدفعي أيضًا. يتضمن الجزء العملي استطلاع رأي الخبراء لتقييم القيم الاستثنائية للعينة المختارة من مباني المدفعي.

وأظهرت نتائج البحث أن عمارة قحطان المدفعي تميزت بتقييم عالي لميزتين استثنائيتين هما: الميزة التكنولوجية، والميزة الجمالية الفنية، وفي حين تم الحفاظ على الأولى بشكل جيد، اما الثانية فتأثرت في بعض المباني نتيجة سوء إدارة هذه المباني وعدم الوعي بقيمتها.

1. Introduction

In the year 1995 Docomomo announced the key exceptional merits with which to evaluate the authenticity of this heritage and add it to its register, while UNESCO included numerous modernist buildings and their sites in the World Heritage List according to its World Heritage criteria. (docomomo_us, web source) (UNESCO، web source).

Many studies started to address topics around the importance of modern heritage worldwide, and interventions to be conducted with respect to its authenticity. For example, but not limited to, the studies by **Mustonen & Polman** (2020), **Hirai** (2020), **Tostões's** (2018) and **Guida** *et al.* (2015) which shed light on the management of specific modernist buildings. The two latter studies highlight several contextual factors such as economic, environmental, social, functional, structural, and design aspects as key influences in the reuse or management of these buildings. Studies of **Lang** *et al.* (2017) and **Doğan's** (2018) adopt specific factors to be essentials for preserving authenticity. While the former emphasizes the physical structure, the latter highlights the importance of the social context (people's perception). **Grom** *et al.* (2018) stressed that renovation and restoration processes that need to be carried out on modern buildings, especially those listed as UNESCO World Heritage Sites should be under specific regulations, conditions, and circumstances. The ultimate goal is for the building in question to maintain its authenticity, value, and status. Additionally, studies such as **Femenias** *et al.* (2023) demonstrate the government's involvement in long-term strategies to perpetuate the modernist heritage and benefit from it instead of getting rid of it. Such studies provide perspectives on how dedicated practitioners and academics are to forthcoming modern heritage projects.

In comparison with literature mentioned above, studies from Iraq are limited to describing characteristics of local modern buildings and analyzing the conditions of their emergence. examples are: **Alp** and **Ahmed's** study (2023), **Adnan** et al. (2021), **Al-Silq** and **Al-Saadi** (2019), **Fadhel** and **Jamil's** study (2019), and **Khudhair** and **Nasser**'s (2010). The same can be said about **Al-Silq** and **Al-Klidar's** study of (2023) which examines modern architecture in Iraq designed by foreign architects, who contributed to leveraging the values of the place and enriched the modernist experience. There is a conspicuous lack of literature on how to envisage a future for national modern heritage buildings, alongside a limited interest by stakeholders and poor understanding of the exceptional values that this heritage holds.

Therefore, we could determine **a two-fold problem:** the first is the lack of awareness of the importance of the modernist architectural heritage, and the second is that DOCOMOMO, as an organization concerned with this heritage, has not yet gained popularity among the public as UNESCO has, especially in countries remote from the origins of modern movement, and where the public is poorly informed about its authenticity, and regulations do not secure its protection. This applies to Iraq, as to other areas of the world. Hence, this paper **has two purposes**. The first is to enlighten the relationship between criteria of DOCOMOMO & UNESCO to provide a more unified solid base for the recognition of modernist heritage values, and second is to contribute to raising awareness of national modern buildings being a valuable heritage with exceptional features worthy of care and preservation.

To achieve the goals of the paper, we follow an analytical descriptive method to extract the main principles of modern architecture movement which were embodied in the features of modernism, then we move to setting the relation between criteria of the main two international bodies UNESCO & DOCOMOMO. Then we conduct a survey on a sample of experts to assess a sample of Iraqi modernist buildings designed by the architect Qahtan Al-Madfai, according to the criteria of DOCOMOMO. Results of this opinion survey are discussed and conclusions drawn.

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2. Theoretical Background

2-1- Principles and Characteristics of the Modern Movement Architecture:

In the early 1920s, pioneering architect Le Corbusier published a statement outlining the five points of modern architecture under the title "The Five Points of a New Architecture." His ideas had a significant impact on the Modernist movement, Figure (1). The principles were as follows as illustrated in Figure (1): (AD, 2023, web source) (Corbusier and Jeanneret, 1926, pp:1-2) (Amiri, 2016, p:1631) (Beyaz and Erçin, 2023, p7).

- Pilotis: Buildings are elevated on a series of reinforced supports (or columns) to lift the ground floor, allowing space for cars or gardens.
- Free design of the ground plan: Essentially an open layout, this principle is linked to structural development and the removal of load-bearing partition walls, enabling flexibility in indoor living spaces.
- Free design of the façade: The structure is separated from the walls, providing greater flexibility for windows and openings.
- Horizontal windows: The horizontal strip windows extend across the façade, allowing for more balanced lighting and a greater sense of space.
- Roof garden: Modern homes should include roof gardens or open spaces, which serve as additional living areas.

Figure (1): Villa Savoye in France - Le Corbusier.[1]

Alongside these rules that provide formal descriptions of the building, modern architecture involves a set of concepts and principles that contributed to the development of its identifiable formal language, including Le Corbusier's five points. These foundational principles could be tracked through quotes and approaches of its pioneers. As stated by Beyaz & Ercin (2023): "The common idea of the function of modern architecture was established through Louis Sullivan's principle of "form follows function," simplicity and economy by Ludwig Mies van der Rohe's "less is more," and transparency, formality, and abstraction from Le Corbusier. (Beyaz and Erçin، 2023 ، p6)

The authors identify four fundamental principles mentioned in the literature that underpin modern architecture[2] . They are outlined as follows:

- Severing ties with the past:

At the onset of its emergence, modern architecture significantly distanced itself from the language of historical architecture and its connection to the old, rejecting tradition, ornamentation, and embellishments. However, it addressed some of the challenges and emerging motivations faced by architects at that time: political, economic, social, scientific, technological, and the shifts in intellectual and cultural thought. (Gil, 2019, p. 178)

Instead of added ornamentation, modern architecture relies on architectural details that are as essential to contemporary structures as they are to those of the past, such as details of window frames, slightly or strongly protruding cornices that serve protective purposes against sunlight through light and shadow. The principle of enriching the form of buildings through structural details, as well as the nature and characteristics of surfaces, pure forms, and the harmony, balance, and order of the design, is emphasized. (Russell and Johnson, 1995, pp: 81-89) (Prajnawrdhi, 2010, p143) (Seelow, 2017, p2)

On another level, the intentions of classical designers in the 19th century focused on creating symmetrical and uniform buildings, visualized in three-dimensional perspective, which limited the creativity of the classical period. In contrast, modern architecture avoided and prohibited symmetry. The result was more flexible and clean forms liberated from the notion of a fixed box. The static quality of classical design was replaced with a dynamic vision, incorporating the element of time or the fourth dimension. (Zachrie and Wijayaputri, 2018, p. 13)

Modernists regarded space as infinite and also expanding in all directions. Additionally, they considered it a measurable space that can be understood and perceived through its structure or geometric composition. Space was also viewed as having a strong relationship with the observer, as both the observer and space are in a state of motion—reflecting the ideas of relativity that were prevalent and inspiring at that time. (Banham, 1989, p. 93)

We conclude that modern buildings are characterized by forms clean of decorative additions, abstract yet expressive and transparent, through the extensive use of windows to convey a sense of infinite space. They exhibit a unified system and organization as well. In this way, they opposed all classical and traditional design principles that were previously adopted.

- Responding to technological progress and the demands of the epoch:

marks architecture as a field that evolves alongside technology, shaped by human imagination and capability. Modern architecture introduces numerous possibilities, the most important of which is that the load-bearing walls are not distributed extensively both vertically and horizontally based on the momentum and gravity, which are fundamental elements in

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1 Source: https://www.architecturaldigest.com/story/100-most-important-buildings-20th-century

2 (Ali Youssef, Web Source) (Abu Diya, 2001) (Ahmed Abdel Jawad, 2011) (Banham, 1989) (Al-Saadi, 2021) (Bilyaminu, 2017, p5) (Bernardo, 2023, p7) (Lin, 2023, p171) (Żmudzińska and Nakıp, 2023, p5) (Okonta, 2018, pp32-36) (Nia and Rahbarianyazd, 2020, p67) (Hitchcock and Johnson, 1966, p25) (DOĞAN, 2020, p68) (Seelow, 2017) (Urfali and Aras, 2022, pp176-204) (

challenging bolder designs. (Zachrie and Wijayaputri, 2018, p13)[3]

Modern construction has increasingly adopted a structure resembling a cage or skeleton, supported by columns. Whether these supports are made of metal or reinforced concrete, managing long distances is achieved through a vertical and horizontal grid of columns. Also, the engineers of that period had respect for new materials, and they were attached to engineering materials such as concrete, iron, glass, and plastic, while they cursed old materials such as marble, bronze, and the monumental parts of buildings. (Russell and Johnson، 1995، pp:55-63) The buildings thus become non-solid, transparent masses through the disappearance of load-bearing walls. The volume is felt as immaterial and weightless, a geometrically defined space. (Karwczyk and others، 2019، p12) (Watts، 2016، p11)

On the other hand, one of the main justifications for adopting new architecture is the emergence of new functions and the fact that some functions have changed, making it impossible for architects to address these functions using past experiences. This compelled contemporary architects to produce and design structures with volumes and shapes that ancient architects could never have conceived. This also contributed to the acceptance of modern architecture as the architecture of the era and a solution to new problems arising from development and new needs. (Banham, 1989, pp. 37-38) (Seelow, 2017, pp. 2-3) In modern architecture, functionality is one of the most important principles that modern architects adhere to when designing a building based on its intended purpose. (Prajnawrdhi, 2010, p. 144)

We conclude that the outputs of modern architecture are characterized by the use of modern building materials and techniques. Advanced modern technologies have been leveraged to produce buildings that meet contemporary functional needs, while also featuring innovative structural solutions that cater to the requirements of modern humans.

- Social Responsibility of Modernist Architect:

The modernist movement has often been mistakenly associated with a style that is superficially viewed and adopted. Consequently, it has not been seen as a framework that seeks to address issues such as economic efficiency, energy efficiency, social equality, and optimization through the efficient use of resources (materials) and forms, with an emphasis on the social mission and architects' responsibility toward the future. Alternatively, recently it is reconsidered as an intelligent approach to design that conserves resources and helps create a better world. Modernist architects (the early pioneers) were guided by profound concepts of form, space, technology, and social responsibility, and above all, a belief in the social mission of the architect to create a new and better world. (Tostões, 2022, p. 8)

The modernists had a strong sense of social responsibility in architecture, which should elevate the living conditions of society and the public. (Henket, 2002, p. 10) After World War II, modernist planning was implemented as a solution to the failure of previous architecture and design in meeting basic social needs. Many modern era projects were initially successful, and the public began to associate this strong aesthetic with prosperity and progress. In the post-war era, the ambitions of modernists appeared progressive and promising to the extent that it was understood to regard the modern movement as the style of the century. (The Rise and Fall of Modernist Architecture, web source)

Modern buildings are characterized by environmental connectivity, particularly in urban settings. This begins with the natural environment and extends to integrating with existing structures, as well as fostering connections within the building itself. For instance, the relationship between one space and another leads to interactions in the physical structure of the building. In contrast, most classical architects view a building as an entity in itself, neglecting the extent to which it contributes to its surrounding environment. (Zachrie and Wijayaputri, 2018, p. 14)

Hence, the tasks of the modernists involved designing buildings that meet societal needs by creating environments that are more luxurious and safer, through spaces that offer greater comfort and innovative structural programmatic solutions. They also apply values of social equality, as seen in the outcomes of residential buildings.

- The principle of economic efficiency and rationalization:

Most modern buildings showcased a clear fundamental rhythm. This significantly contributes to economic considerations by employing standardized and unified parts in similar areas of the building. Additionally, modern architecture expresses its structural system through the similarity of components, adhering to an aesthetic principle that emphasizes fundamental regularity in the building's parts. (Russell and Johnson, 1995, pp: 69-75) (Prajnawrdhi, 2010, p145)

Modern building materials have captured the ideas of most modern pioneers by preparing designs for prefabricated houses (mass production) from modern and light materials. (Banham, 1989, pp. 57-77) (Fu, New construction materials and their modern techniques, such as reinforced concrete and metal structures, enable structural construction while accommodating various external additions like solid stone, lightweight transparent glass, or even exposed concrete (Fair Face). Additionally, the concrete material is formed by creating a mold and reinforcing it with rebar, allowing for geometric shapes, whether they feature right angles and precise designs or curved forms and irregularities. Many different materials for molds have been invented, including wood, plastic, and even cardboard, providing significant advantages in terms of mold construction costs and speed. (Seelow, 2017, p2) (Karwczyk and others, 2019, p12)

We conclude that modernist buildings were characterized by economic efficiency and

[3] The source was translated by the author from Indonesian via Chat GPT-3.5 translation.

rationalization through mass production, standardization of designs and details, and simplicity.

Based on the above, the tangible and intangible characteristics of Modern architecture that embody its principles can be summarized as shown in Table (1).

Table (1): Characteristics of modern architecture that embody its principles. (source: authors).

Principles of Modern Architecture	Characteristics of modern architecture	
	Tangible	**Intangible**
The Principle of Severing Ties with the Past	● Free formations. ● Clean abstract shapes. ● Lack of decoration. ● Formal enrichment through the quality of details and the nature of materials. ● Transparency through the strip windows. ● Regularity and harmony. ● The building is located on the site with free facades (Free standing).	● The feeling of endless space. ● Expression.
Responding to the times and technological progress	● Use of modern building materials (concrete, iron, glass, etc.). ● Use of modern building techniques: standardized construction, exposed concrete, prefabricated building components, etc. ● Use of modern construction systems: structural system, etc. ● Piloties. ● Freedom in designing facades and plans.	● The modern building function meets the requirements of contemporary man. ● Innovative programmatic and structural solutions.
social responsibility of the modern architect	● Spaces that provide comfort and luxury	● Creating a new environment that is more prosperous and safer. ● Social equality through architecture. ● Responding to the demands of society ● Influential buildings that reflect the essence of modernist thought.
Economic efficiency and rationalization	● Quantitative and measured output ● Standard details ● Simplicity ● Life expectancy of the building ● Environmental solutions consideration	● Careful and thoughtful use of materials ● Flexible buildings that accept the principle of reuse

2-1- DOCOMOMO's Criteria for Modern Heritage Merits vs. UNESCO's Criteria for the World Heritage List:

DOCOMOMO - International Committee for the Documentation and Conservation of Buildings, Sites and Neighborhoods of the Modern Movement - is the international organization concerned with the protection of 20th century architecture. (docomomo_us, web source)

Over the past few decades, it has become evident that the products of the modern movement are more susceptible to risk compared to the heritage built in any other period in history. The challenge facing the relics of the modern movement is the difficulty in preserving the architectural creations and their intended purposes. Therefore, they require a distinctive approach that can re-evaluate the manifestations and redefine their meanings. The DOCOMOMO standard guidelines aim to focus on the technological, social, artistic, and aesthetic merits. (Doğan، 2020 ، p72)

The Organization declared six criteria for modern heritage which are intended to highlight its exceptional value, with each merit representing a characteristic of modern design. The site need not qualify in all six categories, but it is typically classified as more significant the more categories it satisfies (docomomo_us, web source). These six criteria are as follows:

1- Technological Merit: Does the work utilize innovative modern technology to solve structural, programmatic, or aesthetic challenges?
2- Social Merit: Does the design reflect the changing social patterns of 20th century life? Has the designer attempted to improve living conditions, work, or human behaviors through the form or function of the work?
3- Artistic and Aesthetic Merit: Does the work demonstrate skill in composition, proportion, scale, materials, and details?
4- Canonical Merit: Is the work and/or architect renowned or influential? Is it a seminal work?
5- Referential Value: Has this work influenced subsequent designers due to one or more of its features?
6- Integrity: Is the original design intent clear? Have material changes been made that affect the architectural integrity of the structure or site?

The UNESCO's criteria for cultural heritage, on the other hand, include: (WHC، 2023، pp29-30)
Criterion (I) Represents a masterpiece of human creative genius.
Criterion (II) Demonstrates significant interchange of human values over time or within a cultural area, through developments in architecture or technology, monumental arts, town planning, or landscape design.
Criterion (III) Provides a unique or exceptional testimony to a living or vanished cultural tradition or civilization.
Criterion (IV) Offers an outstanding example of a type of building, architectural or technological ensemble, or landscape that illustrates significant stages in human history.
Criterion (V) Represents an outstanding example of a traditional human settlement, land-use, or sea-use that reflects a culture or cultures, or human interaction with the environment, especially when facing irreversible change.
Criterion (VI) Is directly or tangibly associated with events or living traditions, ideas, beliefs, or artistic and

literary works of outstanding universal significance. (The Committee encourages the use of this criterion in conjunction with other criteria).

2-3- Framing UNESCO's and DOCOMOMO's Criteria for Modern Heritage:

To frame the correlation between the two sets above, a review to several reports on modern sites listed by the World Heritage Committee (WHC), in the World Heritage List was carried out[4] , the following notes are drawn out, with quotes from the reports:

- The criterion **(I)** by UNESCO, which concerns the property being a masterpiece of human creative genius, relates to both the artistic and aesthetic merit required by DOCOMOMO. As in the Brasilia project, which is described as "a living expression of the principles and ideals presented by the modernist movement". Also, in the Rietveld Schröder House project, which is described within criterion1 as "a wonderful expression of human creative genius in the purity of ideas and concepts".

- under criterion **(II)** by UNESCO, which focuses on showcasing developments in architecture, archaeology, or urban planning, intertwined with the DOCOMOMO's criteria of Canonical merit and Referential value merit. as well as the technological merit, as reports refer to technological and architectural development. The Rietveld Schröder House for example is described in criterion (II) "as having a significant influence and prominence in the development of modern architecture".

Similarly, the Fagus Factory in Alfeld, Germany is described as having "a significant impact leading to the emergence of a rational, modernist architecture and was considered the starting point for the Bauhaus movement", While the Bauhaus and its Sites in Weimar, Dessau and Bernau under this criterion is described as "central works of European modern art, embodying an avant-garde conception directed towards a radical renewal of architecture and design in a unique and widely influential way". Additionally, the 20th-Century Architecture of Frank Lloyd Wright presented an approach that is described as an approach that "took advantage of new materials and technologies, but was also inspired by principles of the natural world and was nurtured by other cultures and eras". Additionally, within criterion **(VI)**, which specifies that "the property must be directly or tangibly associated [...] with ideas, or with beliefs, [...] of outstanding universal significance, can was applied to the Bauhaus complex, being "the foundation of the modern movement that revolutionized artistic and architectural thinking and practices in the 20th century". Therefore, we observe here a group of intangible values merging within a single framework, without distinct boundaries, comprising all the criteria mentioned in the previous lines.

- And the criterion **(IV)**, which specifies that the property must be "an outstanding example of a type of building, architectural or technological ensemble…", intertwined with the DOCOMOMO's criteria of the Technological merit, as reports refer to technological and architectural development. Under criterion **(IV)** the Fagus Factory in Alfeld is described that "It exemplifies the innovation of the curtain wall, which optimises both luminosity and lightness. It is a concrete expression of the functionality of the industrial complex in the interest of productivity and the humanisation of the working environment". and the sites of Brasilia city, the Bauhaus complex, and the Tugendhat Villa, were described as some of "the most important buildings that contributed to the spread of modernist thought and had a significant influence on other designers".

Criterion (III) which identifies the property as "a unique or at least exceptional witness on cultural tradition", can be a mirror to the social merit - by DOCOMOMO- which considers the design to reflect the changing social patterns of life in the twentieth century, where these modern social patterns somehow represent the cultural tradition at the time. As in the Hospicio Cabañas, Guadalajara (listed in 1997) and Serial Nomination of Tehran's Modern Architectural Heritage (listed in 2021).[5]

Finally, the integrity feature required by the DOCOMOMO organization as a criteria looks at the level of preservation of the property's original characteristics and its safety from significant changes to its modernist features. This aligns with meeting the authenticity requirements for the property set by UNESCO. The interconnected relationships between the criteria of the two organizations can be expressed in Table (2) and Figure (2).

Table (2): Relationship between UNESCO and Docomo criteria. (source: author).

UNESCO criteria	Docomo Momo Merits	Description
Criterion (I): The property must represent a masterpiece of human creative genius.	**Artistic and Aesthetic merit**	The work demonstrates skill in composition and handling of proportion, volume, materials and detail.
Criterion (II): Demonstrate developments in architecture, technology, archaeological art, urban planning, etc.	**Canonic merit**	The work or architect is famous and influential through his exemplary work.

[4] Based on UNESCO's description of these modernist examples in the WHL: (UNESCO - Brasilia, web source) -The 20th-Century Architecture of Frank Lloyd Wright (UNESCO - Rietveld Schröder House, web source) - (UNESCO - Fagus Factory in Alfeld, web source) - (UNESCO - Bauhaus and its Sites in Weimar, Dessau and Bernau, web source) - (UNESCO - Tugendhat Villa in Brno, web source) and (docomomo_us, web source) - (WHC، 2022، pp 29-30) (UNESCO، web source).

[5] (UNESCO - Serial Nomination of Tehran's Modern Architectural Heritage, web source) (UNESCO - Hospicio Cabañas, Guadalajara, web source)

Criterion (VI): The property must be directly or tangibly linked to events, living traditions, ideas, beliefs, or works of art and literature of outstanding global significance, when the building is an exemplary expression of modernist thought.	**Referential Value**	Through the influence of the work on subsequent designers as a result of one or more of its features.
Criterion (IV): The property must be an outstanding example of a type of building, architectural or technological ensemble that illustrates an important stage in human history.	**Technological merit**	Innovative modern technology to solve structural, programmatic or aesthetic challenges
Criterion (III): The property must be a unique or at least exceptional testimony to a cultural tradition, which is (modern) according to the subject of the current research.	**Social merit**	The design reflects the changing social patterns of life in the twentieth century, and the designer's attempt to improve living or working conditions or human behaviors through the form or function of the work.

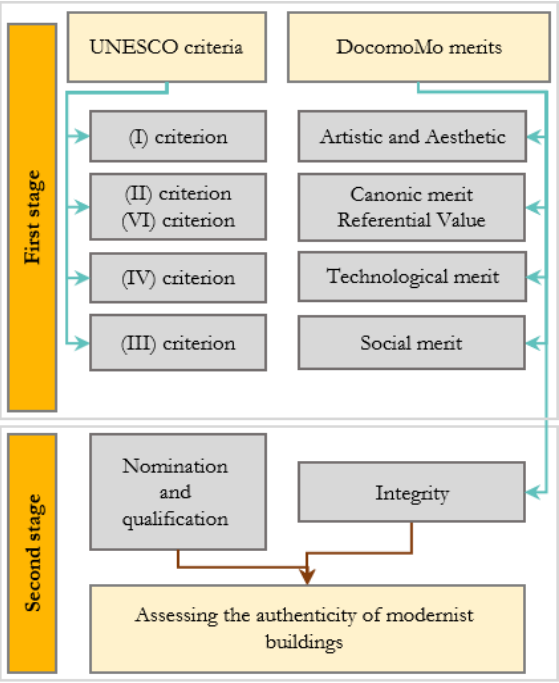

Figure (2): Linking the criteria of the two organizations for the purpose of the nomination and qualification process before starting to evaluate the modern buildings to be preserved.

3. Assessing Qahtan Al Madfai's Modern Heritage:

In this section will briefly introduce architect Qathan Al-Madfa'i and select five buildings designed by him. Then discuss the evaluation steps and their results.

3-1- Significance of Qahtan Al-Madfai:

Qattan Al-Madfa'i is considered one of the icons of local modern architecture and a pioneer in the expressive modern movement. His work is characterized by its striking expressive aspect, through the creation of unusual relationships and forms linked to the power of expression, impact, and emotion. This is attributed to the mastery of the expressive movement leaders in the strong knowledge of reinforced concrete, which enabled them to produce dynamic expressive forms. They did not adhere to the prevailing right angles. (Al-Husaini, 2017, p. 53)

The architect Qathan Hassan Fahmi Al-Madfa'i was entrusted with the design of numerous buildings, each revealing his unique and distinctive style, placing him among renowned Iraqi architects on a global scale. Among his notable works are the Buniya Mosque, the Ministry of Finance, the Iraqi Society of Plastic Arts Building, the Memorial and Landscapes of the 14th of July Park, and the Iraqi Research Center and Museum of Natural History. Al-Madfa'i's architectural style was characterized by its individuality. He not only incorporated environmental and functional aspects in his designs but also strived to create a distinct signature reflecting his architectural themes through explicit expression. (Al-Sultani, 2000, pp. 617-626)

Al Madfai's architecture is characterized by excess and uniqueness, through the three-dimensional structural form, taking full advantage of the local craft expertise and techniques of that period in the construction process, resulting in works of great aesthetic value. We observe that his work in the 1960s began to reach professional maturity, reflected in the structural building materials, methods of producing a distinctive and dynamic structural frame. (Al-Shalabi, 2015, pp. 3-6)

Al-Madfa'i's works are characterized by being derived from our contemporary era, whether locally or internationally, and also by embracing modern technology and materials in traditional buildings. He utilizes concrete arches as a deductive case from Islamic arches, as seen in the Iraqi Society of Plastic Arts Building in Baghdad. Consequently, Al-Madfa'i deals with identity within its functional and personal scope, relying on the contemporary architectural act according to interpretation and responding to it through innovation. (Adnan and others, p7, 2021)

Buildings of Al Madfai are therefore good examples to test various modernist values or features, which were tackled in the previous sections. They represent prominent examples of national modern architecture of the mid-twentieth century. The current study will identify and evaluate a sample of his works to reveal the exceptional values they held at their time.

3-2- Application and Evaluation Requirements:

This section of the study aims to test and demonstrate the reliability of the theoretical framework by examining the variables and concepts within it, specifically in relation to the selection of modern buildings for preservation purposes. Subsequently, an assessment of their level of modern heritage authenticity will be conducted through testing and examining the hypotheses of the first section.

3-3- Research samples and reason for selection:

Five projects representing the innovative ideas of the local artillery industry during the 1950s, 1960s, and 1970s have been selected as the research sample. These samples and their specifications before and after any changes will be described in the appendices specific to each project. Each project will be described using the information collection form for each sample. Based on published sources, site visits, direct observation, and inquiries from the personnel involved in some of these projects – conducted by the researcher:

1. Alruhun Bank Building 1957 in Baghdad - Al-Jumhuriya Street, the building is administrative, appendices (C-1).
2. Dr. Kamal Al-Samarra'i Building 1957 in Baghdad - Al-Amin Street, the building is commercial, appendices (C-2).
3. The building of the Society of Fine Artists 1967 in Baghdad - Al-Mansour, the building is cultural, appendices (C-3).
4. Natural History Research Center and Museum 1967 in Baghdad - Bab Al-Muadham, the building: educational - cultural, appendices (C-4).
5. Ministry of Finance building 1976 in Baghdad - Al-Waziriyah, nature of the building: governmental, appendices (C-5).

The most important reasons for choosing these buildings are:

1. All the buildings are public structures frequented by a significant number of people, both past and present.
2. They occupy prominent locations within the city of Baghdad, making them easily noticeable by the local community.
3. The availability of key information about them allows for their effective description.
4. Being located in Baghdad, they are easily accessible to researchers.

3-4- Evaluation tools:

The researcher adopted a two-stage process to evaluate the authenticity and value of the modern local heritage, using a questionnaire to be filled out by specialists. The target group included academic architects and experts with knowledge of local modern architecture, as well as members of Docomomo Iraq.

The survey form was created electronically by the researcher using a web browser (Google Drive) and sent to relevant parties via email or other communication platforms through an electronic link. Responses were collected and entered into an Excel spreadsheet. A total of 25 surveys were collected.

The questionnaire initially included a section dedicated to demographic information for each professional participant, encompassing their name, education level, specialization, years of experience, and place of work. Additionally, it incorporated a more specialized question related to the field of Modern Heritage, inquiring whether the resident was a member of the Iraqi branch of Docomomo, an organization dedicated to local Modern Heritage. The results for this section are presented in Table (3). Subsequently, the questionnaire questions were presented as outlined in Supplement (C-6).

Table (3): Results of demographic information of professional participants in the questionnaire form. (source: author).

Educational level	*number*	*specialization*	*number*	*Years of Experience*	*number*	*work place*	*number*
PhD	18	Architect	24	More than 25 years	12	University of Nahrain	7
Master	5	Urban Planner	1	15-25 years	8	University of Baghdad	5
Bachelor	2	Architectural Critic	0	10-15 years	5	Al-Mustansiriya University	2
Total	25	Structuralist	0	5 years or less	0	University of Babylon	2
		Total	25	Total	25	Other	9
						Total	25

To facilitate the analysis of the professional participants' results, the samples and all the terms used in the questionnaire form will be coded according to Table (4):

Table (4): Evaluation vocabulary coding. (source: author).

Selected local research samples	The symbol	Exceptional Value Indicators (X)	The symbol
First experiment	**A**	Technological merit	X_1
Second experiment	**B**	Artistic and Aesthetic merit	X_2
Third experiment	**C**	Canonic merit	X_3
Fourth experiment	**D**	Referential Value	X_4
Fifth experiment	**E**	Social merit	X_5

The assessment at this stage will utilize historical images and explanatory information included in this phase, illustrating the building's original condition (before any alterations were made, if any). This information will assist specialists in evaluating and formulating appropriate responses. This phase includes five closed-ended questions and a sixth question representing the assessor's perspective on the building's exceptional value, as detailed in Appendix (C-1).

The first five questions were designed based on the closed type of answer, so that it is easy for specialists to give their answers easily and for the researchers to analyze them easily. The answers were designed in a way that the evaluators could only answer one.

Based on the **closed five-point Likert Scale**, the weights of the answers were placed from (5) to (1) in order between (strongly agree - agree - somewhat - disagree - disagree at all). (Omar and Ahmed, 2010, p. 2) (Al-Lami, 2021, p. 1)

In order to calculate (interval), mathematical operations are applied that depend on the weight of the value within the other five values. In the case of

the first answer (I strongly disagree), the interval is calculated by subtracting the weight of the value from the number of values (5-1=4) to represent the number of answer units, then dividing the number of answer units by the number of values (so 4/5=0.80). Thus, the interval of the first answer (I strongly disagree) is between (1) and (0.80+1), and so on for the periods of the remaining answers, where the increase is by (0.80) according to the weight of the answer as in Table (5). This process helps us determine the standard trend of the answers, which is considered the level of satisfaction within the Likert scale and indicates whether there is an exceptional value for the building or not. (Al-Mirgi, 2020)

Table (5): Coding and weighting of evaluation answers within the five-point Likert scale and level of satisfaction. (Statistical Reasoning – Likert Scale, 2019, Web Source) with author's edits.

The symbol	The opinion	Likert Scale	interval
Q_1	strongly disagree	1	1 to 1.79
Q_2	disagree	2	1.80 to 2.59
Q_3	rather	3	2.60 to 3.39
Q_4	Agree	4	3.40 to 4.19
Q_5	Strongly agree	5	4.20 to 5

Then the paragraph points are calculated by multiplying the weight of each answer by the number of times it is repeated for all answers, so that we can calculate the paragraph evaluation by dividing the paragraph points by the number of five paragraphs, as in the equation below: (Topic - How can the arithmetic mean be calculated in the Likert scale?, 2022, Web source)

$$[(Q5\ Likert\ Scale \times repetition) + (Q4\ Likert\ Scale \times repetition) + (Q3\ Likert\ Scale \times repetition) + (Q2\ Likert\ Scale \times repetition) + (Q1\ Likert\ Scale \times repetition)]\ /5$$

Thus, the paragraph evaluation is extracted in order to apply the standard trend for each paragraph within the five-point Likert scale and see the level of satisfaction with it. The percentage is also calculated by dividing the paragraph evaluation by (5) and multiplying the result by (100).

Determine the attributes (exceptional) value of each building: The authors show the percentages represented by the basic terms that show the exceptional value of the buildings:

- For the Alrahun bank building: Know the evaluation results through Figure (3) and Table (6) in appendices (C-7), for the items that represent the exceptional values:

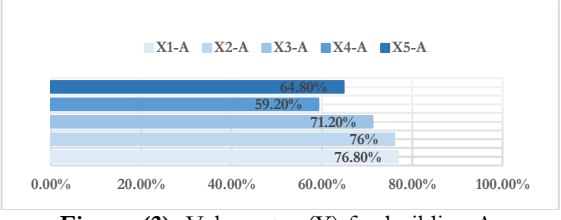

Figure (3): Value rates (X) for building A.

The sixth question, which was an evaluation of the main vocabulary, included whether the building had (global value - regional - local - not exceptional value). The answers, according to the number of participants, were global (5), regional (3), and local (13), while there were (4) answers considering the building not to have exceptional value.

- For Dr. Kamal Al-Samarrai's building: The evaluation results are as in Figure (4) and Table (7) in appendices (C-8):

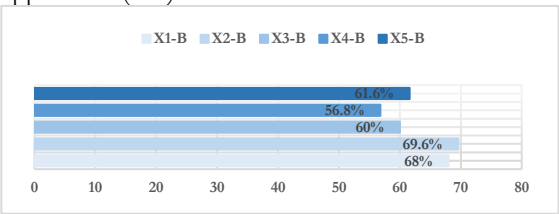

Figure (4): Value rates (X) for building B.

The sixth question of the evaluation included an evaluation of the main vocabulary, and the answers were global (1), regional (1), and local (10), while there were (13) answers that the building does not have exceptional value.

- For the Artists' Association Building: The evaluation results are as shown in Figure (5) and Table (8) in appendices (C-9):

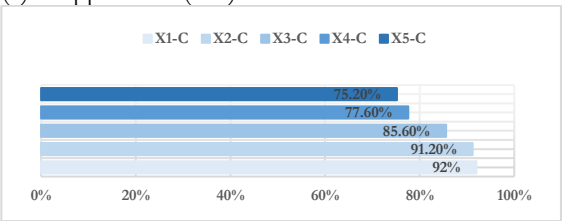

Figure (5): Value rates (X) for building C.

The sixth question included an evaluation of the main vocabulary, where the question was whether the building has (global value - regional - local - does not have exceptional value). The answers were according to the number of participants for global (6), regional (10), and local (9).

- For the Natural History Research Center and Museum building: The evaluation results are as shown in Figure (6) and Table (9) in appendices (C-10):

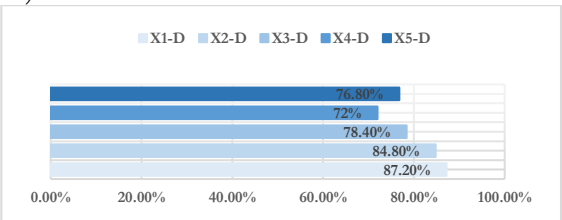

Figure (6): Value rates (X) for building D.

The sixth question of this stage included an assessment of the nature of the value, where the answers were for global value (6), regional value (7), and local value (8), while there were (4) answers that the building does not have exceptional value.

- For the Ministry of Finance building: The evaluation results are as shown in Figure (7) and Table (10) in appendices (C-11):

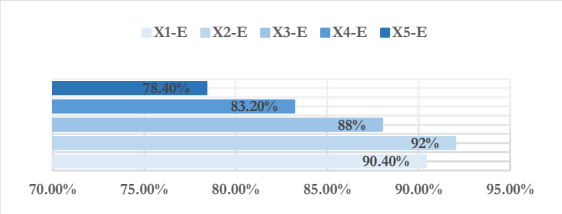

Figure (7): Value rates (X) for building E.

The sixth question of this evaluation stage included determining the nature of the building's exceptional value. The answers were global (10), regional (7), and local (7), while there was one answer that the building does not have exceptional value.

3-5- Results Analysis:

- In Building A (Alrahun Bank Building): the results of the general building value assessments showed that the highest scores were for (X1) Technological Advantage and (X2) Technical and Aesthetic Advantage (76% - 76.5%), indicating a good level. Conversely, the lowest value, at 59.2%, was for (X4) Benchmark Value Advantage. The remaining values (X3-X5) ranged from average to close to good, between 64.8% and 71.2%. These findings suggest that the designer effectively utilized innovative modern technology, aided by their skill in handling proportions, materials, volumes, and details in the design of this building. The building also received a good evaluation for possessing exceptional value, with the sixth question results showing 52% of local residents deeming it exceptional, 20% worldwide, and 12% regionally. However, 16% of the assessments considered the building to lack exceptional value.

- In Building B (Dr. Kamal Al-Samarrai's Building): the highest scores were achieved in (X2) with a rating of (69.6%), which pertains to the artistic and aesthetic aspects, and (X1) with a rating of (68%), representing technological features. This suggests the building reflects these elements at an average level. The lowest rating was in (X4) with a score of (56.8%), indicating the building's limited impact on the modern architects' milieu. Other scores ranged between (60% - 61.6%) in (X5-X3), which fall within a moderate range. Reviewing the work, it appears Al-Madfa'i aimed to showcase his skill in handling proportions, details, materials, and modern technological aspects, particularly evident in the facade. As the building was defined by its surroundings, this approach allowed for the creation of a meaningful modern design. Expert evaluations of the building's overall value revealed that a majority of assessors (52%) considered it to be of no value. Conversely, the local value of the building was rated at (40%), while both global and regional values were each rated at (4%).

- In Building C (Artists' Association Building): We observe that the building received high scores in (X1-X2) with an average of (91.2% - 29%) each. The lowest value was (X5) with a score of (75.2%). The value of (X4) was (85.6%). (X3) scored above good (85.6%). It is clear that the building's exceptional values are generally very good or excellent and meet the required standards. The building possesses significant value reflected in its technological, artistic, and aesthetic aspects. Additionally, the building's fame can be included as a factor. The assessment of the building's core value revealed results that can be considered reliable, with the building possessing a global value of (24%), a regional value of (40%), and a local value of (36%). This indicates that the architect was proficient in modern technology and materials, as well as skilled in handling proportions and forms, as seen in the building's ceiling and the cladding material of the facades. This resulted in a modern design that had an impact on the modern architectural context during the late 1960s.

- In Building D (Natural History Research Center and Museum building): The highest (Y) rating was within the value of (X1) at a rate of (87.2%), which is a very good value. It was followed by the value of (X2) which was above good (84.8%). The lowest value was (X4) with a rating between average and good (72%). While the values of (X5-X3) are close to the good level (76.8% - 78.4%). Also, most of the evaluation results for the exceptional value of the building were (24%) for the global value, (28%) regionally, and (32%) locally, while (16%) were that the building has no value. Here also, Al-Madfai was distinguished in the technological, artistic, and aesthetic aspects through modern materials and technology and dealing with proportions, details, and composition, especially playing with the nature of the modern material represented by reinforced concrete and expressing through modern forms. Here also we notice the solutions to the construction challenges in a striking and distinctive way, with the large amount of details such as formal enrichment and modern materials in the cladding such as stone.

- In Building E (Ministry of Finance building): the highest value was within the range of (X1-X2) at (90.4% - 92%), a good assessment reflecting the technological, technical, and aesthetic value of this building in terms of its use of modern and innovative techniques, as well as its skillful handling of proportions and volumes. This is followed by the value of (X3) at (88%), signifying the general fame of both the designer and the building, with its function as a ministry building contributing significantly to its renown. Furthermore, (X4) received an assessment of (83.2%), a good level representing the significant influence this building has had on other designers. Meanwhile, the lowest value was within (X5) at (78.4%), representing an average level. In terms of assessing the nature of exceptional value, we observe that the building possesses a global value of (40%), with regional and local values at (28%) each. A value of (4%) was assigned, considering the building does not have exceptional value. Through analyzing the assessment results, we note the designer's excellence in technical and aesthetic aspects as well as technological aspects, particularly the skillful handling of proportions and volumes evident in the building, which reflects dynamic facades that change with the viewing angle. The building also demonstrates the adaptation of modern materials through innovative structural and aesthetic solutions.

In general, the results show that most of the buildings have exceptional values (X - in the selected buildings) within the characteristics of the Docomomo

organization, as they are important local buildings that must be preserved and cared for. The results show that these buildings suffer from a lack of interest and care.

4. Conclusions:

- The significance of modern heritage on a global level is evident in the recent surge of interest in modern heritage among international nations. This growing interest has drawn the attention of organizations and institutions dealing with modern heritage, such as the International Committee on Monuments and Sites (ICOMOS) and UNESCO.
- Many Iraqi modern architectural works embody exceptional historical values, reflecting Iraq's mid-20th century lifestyle, especially Baghdad's openness to global modernism. Created by the first and second generations of Iraqi modern architects, these works highlight the principles of 20th-century modernism, showcasing unique formal and informal characteristics. However, many of these iconic structures suffer from neglect, poor management, and alterations, compromising their authenticity. Continued misuse and insufficient preservation efforts threaten their value due to a lack of awareness about their heritage significance and proper conservation methods."
- The results show that most of the buildings possess exceptional values (X - in the selected samples) within the Docomomo features, considering them as significant local structures that should be preserved and cared for. However, the results also reveal that these buildings suffer from a lack of attention and consideration.
- By analyzing the results of the questionnaire evaluation in value (X) for the selected experiments, we observe that the highest percentage achieved for value (X) for experiments (A-B-C-D-E) for artillery products was within value (X1 – X2). This is where technological, technical, and aesthetic advantages were unique and evident in these products. This can be confirmed by analyzing all values within each experiment, as shown in table (11) and figure (8), where we notice a variation in the rates of values within these experiments. The aesthetic and technical value, as well as the technological value, emerged with the highest values.

Table (11): Average values of the item X in all buildings.

	Single X				
The experience	X1	X2	X3	X4	X5
A	76.8	76	71.2	59.2	64.8
B	68	69.6	60	56.8	61.6
C	92	91.2	85.6	77.6	75.2
D	87.2	84.8	78.4	72	76.8
E	90.4	92	88	83.2	78.4
the average %	**82.88**	**82.72**	**76.64**	**69.76**	**71.36**

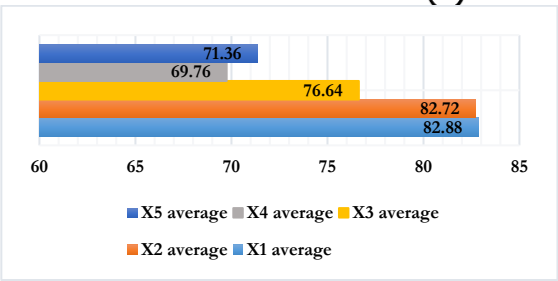

Figure (8): shows the variation in the rates of the values of the single X within the buildings.

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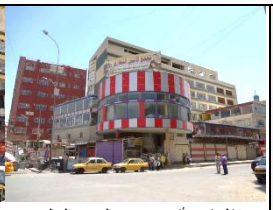
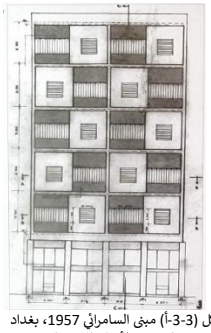
6. Appendices:

- Appendix (C-1):

تعريف المشروع	الموقع	العراق – بغداد – شارع الجمهورية	الرمز: A
	السنة	1957م	
	المصمم	قحطان المدفعي بالاشتراك مع المعماري عبد الله احسان كامل	
	طبيعة المبنى	اداري (مصرف ومكاتب إدارية)	
الخصائص البنائية والمعمارية	المبنى عبارة عن كتلتين مرتبطتين بمستويات مختلفة، الصغرة والامامية بشكل اسطوانة (التي كانت بالأصل ذات شكل مستطيل) لأغراض الإدارة، اما الثانية المستطيلة الشكل والمتعددة الطوابق التي تتضمن باقي فضاءات المصرف ومكاتب ادارية. (الشلبي، 2018، ص216) اما من الناحية الإنشائية، فتم استخدام نظام الاعمدة والجسور مع بناء التقطيعات من مادة الطابوق. يتميز المبنى بالمقياس الهندسي الضخم حينها، واللغة المعمارية ذات المفردات المعبرة الصافية من خلال الكتلتين ذات احجام متضادة التي اعتبرت ممارسة بنائية غير مألوفة حينها. (نكهة عمارة الحداثة المؤولة، مصدر الكتروني) وعلى مستوى الواجهات فقد استثمر المعماري الواجهة الجنوبية الامامية التي عكست التعبير المؤثر من خلال تغليفها بشاشة (screen) من كاسرات الشمس (louvers) والتي اعتبرت أنظمة انشائية جديدة حينها في النسيج العمراني المحلي. اما مادة الاكساء فكانت تحمل اللون البني الفاتح والغامق. (السلطاني، 2014، ص187)		
صور المبنى	 شكل (3-1-ب) مبنى مصرف الرهون بداية الستينيات، بغداد. رابط المصدر  شكل (3-1-أ) مبنى مصرف الرهون 1963، بغداد. رابط المصدر		

	 شكل (3-2-ب) وضع مبنى الرهون الحالي. رابط المصدر  شكل (3-2-أ) وضع مبنى الرهون الحالي. رابط المصدر

- Appendix (C-2):

تعريف المشروع	الموقع	العراق – بغداد – شارع الأمين	الرمز
	السنة	1957م	B
	المصمم	قحطان المدفعي	
	صنف المبنى	تجاري (مكاتب إدارية)	
الخصائص البنائية والمعمارية	يتكون المبنى من ستة طوابق، كما تم استخدام نظام الاعمدة والجسور مع بناء التقطيعات من مادة الطابوق. تميز هذا المبنى كما وصفهُ السلطاني "حضور القحطاني المتمرد" بنية الترثي فيه، حيث تصميم الواجهة التي تضمن تصميمها البروزات والارتدادات المتعاقبة ذات الانتظام لسطوح الفتحات او استخدام الألوان. حيث يعكس التعبير الصريح خلال السياق العمراني المجاور. في حين على مستوى المخططات، فينكر السلطاني ذلك ايضاً باعتبارها لم ترتق الى مستوى حدث الواجهة حيث بداعة المصمم وحيوتهُ ونشاطهُ. (السلطاني، 2014، ص208) كما وقد أشار لها المعماري محمد رضا الشلبي باعتبارها احدى اعمال المدفعي المتميزة في تلك الفترة، باعتبارها احدى نتاجات الحداثة المحلية. (الشلبي، 2018، ص220) نلاحظ تناغم فتحات الواجهة من حيث الترتيب والمساحة، فنستشعر التكوين الهندسي المربع والمقسم على الطوابق (كل طابق قُسم الى أربع اقسام متعاقبة مربعة الشكل تحمل نوعين من الفتحات ككل). مع وجود إطار بارز من الخرسانة وهو بمثابة استغلال وتوظيف أعمدة وجسور المبنى بالتعبير الشكلي الخارجي. كما ونلاحظ ارتباط المبنى مع المباني المجاورة من خلال استمرار أعمدة المجاورات وبروزها على نفس النسق.		
صور المبنى	 شكل (3-3-ب) مبنى السامرائي خلال فترة لاحقة، بغداد. المصدر: (الشلبي، 2018، ص221) مع تعديلات الباحث.  شكل (3-3-أ) مبنى السامرائي 1957، بغداد – المرتسم الأصلي للواجهة. المصدر: (الشلبي، 2018، ص221) مع تعديلات الباحث.  شكل (3-4-ب) مبنى السامرائي حالياً. المصدر: (السلطاني، 2014، ص191) مع تعديلات الباحث.  شكل (3-4-أ) مبنى السامرائي حالياً. المصدر: (السلطاني، 2014، ص190) مع تعديلات الباحث.		

- Appendix (C-3):

تعريف المشروع	الموقع	العراق – بغداد – المنصور	الرمز
	السنة	1967م	C
	المصمم	قحطان المدفعي على حساب منحة مؤسسة كولينكيان	
	صنف المبنى	ثقافي	
الخصائص البنائية والمعمارية	تميز هذا المبنى بالشكل المستطيل البسيط الذي ضم بداخلهُ كل فعاليات وظائف الجمعية. كما يحتوي المبنى على مدخلين: الرئيسي الأمامي المطل على شارع دمشق مقابل متنزه الزوراء والخلفي المطل على الباحة الخلفية للمبنى. كما نلاحظ أن المبنى يخلو من الفتحات الخارجية عدا فتحات المداخل. كما تم اكساء الجدران بمادة الحجر بعضها بارز والأخر مرتد وبقياسات مدروسة والبعض منها يحمل أشكالاً هندسية ملفتة نظمت بترتيب متعاقب ومنتظم. (الشلبي، 2018، ص243) ويمكن ملاحظة تعامل المدفعي مع سقف المبنى كعنصر معماري ملفت، حيث يتكون من أقبية مدببة ومسطحة مستمرة على طول السقف من مادة الخرسانة ذات قياسين مكررين وفق إيقاع تنتهي من جانبيها بنوافذ.		
صور المبنى	 شكل (3-5-أ) واجهة مبنى جمعية الفنانين التشكيليين منتصف السبعينيات. رابط المصدر: مع تعديلات الباحث  شكل (3-5-ب) مبنى جمعية الفنانين التشكيليين نهاية التسعينيات. رابط المصدر: مع تعديلات الباحث  شكل (3-6-أ) مبنى جمعية الفنانين التشكيليين حالياً. المصدر: الباحث.  شكل (3-6-ب) مبنى جمعية الفنانين التشكيليين حالياً. رابط المصدر: مع تعديلات الباحث		

- Appendix (C-4):

تعريف المشروع	الموقع	العراق – بغداد – باب المعظم	الرمز
	السنة	1967م	D
	المصمم	قحطان المدفعي	
	صنف المبنى	تعليمي - ثقافي	
الخصائص البنائية والمعمارية	في هذا المبنى استخدم نظام القطع الزائدي الهايبربولك (Hyperbolic)، حيث سقف بناية المعرض تحمل اشكالاً سرجية. الشكل العام للمبنى بالشكل المستطيل العام الذي يضم كافة الفعاليات، حيث كانت الفعاليات (بناية المعرض الرئيسي، بهو المدخل الدائري المميز، بناية المكتبة المتعددة الطوابق، وبناية الإدارة). وتميز التصميم بتسقيف فناء المدخل الدائري بجسور شعاعية ودائرية تعكس إحساس التواصل المفتوح مع السماء. (الشلبي، 2018، ص244) يتكون المخطط العام للمبنى من خمسة مباني، وكانت هنالك خطة لتنفيذ المبنى على مرحلتين، حيث الأولى الخاصة بتنفيذ جزء المدخل المعرض والمكتبة وجناح الإدارة. في حين الثانية التي تضمن الورش وجزء من غرف الأساتذة والمحاضرين وخبراء الحفاظ (التحنيط) وكراج مسقف، وهذه المرحلة لم يتم تنفيذها بعد. وهنالك مصادر غير مؤكدة ذكرت النية بتنفيذ الجزء غير المنفذ من المبنى. اما بالنسبة للجدران الخارجية للمبنى، تضمنت معالجات الجدران الخارجية لبناية المعرض والمكتبة استخدام مادة الحجر في التغليف، وبطريقة ميلان القطع لخلق نقاط ارتداد وبروز هذه القطع مع بعضها لتعكس البداعة خصوصاً من جانب الظل والضوء. اما بناية الإدارة التي تكونت من طابقين، فاحتوت على بهو مسقف تطل عليه فضاءات الإدارة.		

- Appendix (C-6):

استمارة استبيان – بيان القيمة الاستثنائية للمباني الحداثية المحلية				
اولاً: المعلومات الديموغرافية:	في هذا القسم، نرغب في جمع بعض المعلومات الشخصية للمشاركين في هذا الاستبيان. مثل المستوى التعليمي، سنوات الخبرة، ومعلومات ذات صلة. حيث هذه المعلومات سوف تساعدنا في تحليل واستنتاج ومعرفة البيانات بشكل ادق وأعمق.			
-1- المستوى التعليمي:	2-ما هو تخصصك؟ مهندس معماري مخطط حضري مهندس انشائي ناقد معماري	3-كم عدد سنوات الخبرة لديك في مجال تخصصك؟ 5 سنوات او اقل بين 5-10 سنوات بين 10-15 سنة بين 15-25 سنة أكثر من 25 سنة	4- محل العمل:	هل انت عضواً في دوكومومو العراق؟ نعم لا

جدول الاستمارة (1): المفردات الرئيسية- تحديد القيمة الاستثنائية للمبنى التي تجعلهُ جديراً بالحفاظ.

مؤشرات القيمة الاستثنائية	التفاصيل
- الميزة التكنولوجية	يستخدم العمل التكنولوجيا الحديثة المبتكرة لحل التحديات الهيكلية أو البرنامجية أو الجمالية.
- الميزة الفنية والجمالية	يُظهر العمل مهارة في التركيب والتعامل مع النسبة والحجم والمواد والتفاصيل.
- الميزة الشهرة والتأثير	العمل أو المهندس المعماري مشهور ومؤثر- العمل مثالي يمثل الفكر الحداثة.
- ميزة القيمة المرجعية	كان لهذا العمل تأثير على المصممين اللاحقين نتيجة لواحدة أو أكثر من سماته.
- الميزة الاجتماعية	يعكس التصميم الأنماط الاجتماعية المتغيرة للحياة في القرن العشرين؟ وهل حاول المصمم تحسين ظروف المعيشة أو العمل أو السلوكيات الإنسانية من خلال شكل العمل أو وظيفته.

ثانياً: استبيان المشاركين حول التجربة المحلية لأصالة التراث المبني الحداثي من خلال تقييم اصالة العينات المنتخبة:	كانت الأسئلة على النحو التالي: 1- (الميزة التكنولوجية) هل يستخدم العمل التكنولوجيا الحديثة المبتكرة لحل التحديات الهيكلية او البرنامجية او الجمالية؟ 2- (الميزة الفنية والجمالية) هل يُظهر العمل مهارة في التركيب والتعامل مع النسبة والحجم والمواد والتفاصيل؟ 3- (ميزة الشهرة والتأثير) هل العمل او المصمم مشهوراً ومؤثراً؟ وهل العمل مثالي؟ 4- (ميزة القيمة المرجعية) هل كان لهذا العمل تأثيراً على المصممين اللاحقين نتيجة لواحدة او أكثر من سماته؟ 5- (الميزة الاجتماعية) هل يعكس التصميم الأنماط الاجتماعية المتغيرة للحياة في القرن العشرين؟ وهل حاول المصمم تحسين ظروف المعيشة أو العمل أو السلوكيات الإنسانية من خلال شكل العمل أو وظيفته؟ 6- من خلال اجاباتك السابقة لهذهِ التجربة، هل تعتقد ان المبنى كان يحمل قيمة استثنائية؟

- Appendix (C-7): Table (6)

Paragraph	*Strongly agree*	*Agree*	*rather*	*disagree*	*strongly disagree*	*Paragraph points*	*Paragraph evaluation*	*standard deviation*	percentage
X_1-A	4	15	4	2	0	96	3.84	Agree (3.40-4.19)	76.8%
X_2-A	6	9	9	1	0	95	3.8	Agree (3.40-4.19)	76%
X_3-A	0	16	7	2	0	89	3.56	Agree (3.40-4.19)	71.2%
X_4-A	0	8	8	9	0	74	2.96	rather (2.60-3.39)	59.2%
X_5-A	1	10	9	4	1	81	3.24	rather (2.60-3.39)	64.8%

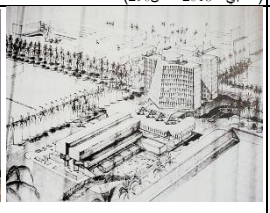
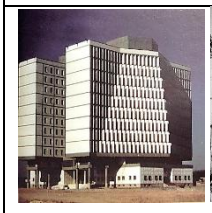
- Appendix (C-8): Table (7)

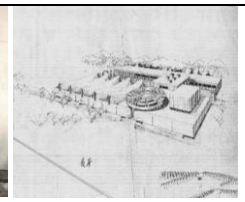
Paragraph	*Strongly agree*	*Agree*	*rather*	*disagree*	*strongly disagree*	*Paragraph points*	*Paragraph evaluation*	*standard deviation*	percentage
X_1-B	1	13	7	3	1	85	3.4	Agree (3.40-4.19)	68%
X_2-B	2	11	10	1	1	87	3.48	Agree (3.40-4.19)	69.6%
X_3-B	0	5	15	5	0	75	3	rather (2.60-3.39)	60%
X_4-B	0	3	16	5	1	71	2.84	rather (2.60-3.39)	56.8%
X_5-B	2	4	14	4	1	77	3.08	rather (2.60-3.39)	61.6%

- Appendix (C-9): Table (8)

Paragraph	*Strongly agree*	*Agree*	*rather*	*disagree*	*strongly disagree*	*Paragraph points*	*Paragraph evaluation*	*standard deviation*	percentage
X1-C	17	6	2	0	0	115	4.6	Strongly agree (4.20-5)	92%
X2-C	16	7	2	0	0	114	4.56	Strongly agree (4.20-5)	91.2%
X3-C	10	12	3	0	0	107	4.28	Strongly agree (4.20-5)	85.6%
X4-C	6	10	9	0	0	97	3.88	agree (3.40-4.19)	77.6%
X5-C	5	11	7	2	0	94	3.76	agree (3.40-4.19)	75.2%

- Appendix (C-5):

تعريف المشروع	الموقع	العراق – بغداد – الوزيرية	الرمز
	السنة	1976م	E
	المصمم	قحطان المدفعي	
	صنف المبنى	حكومي	
الخصائص البنائية والمعمارية	يتكون المبنى ذو 14 طابق من برجين متماثلين يرتبطان مع بعضهما البعض بارتفاعات مختلفة من خلال جسور معلقة من مادة الخرسانة. يتشابه البرجين في المعالجات الخارجية مثيله الاخر على مستوى الواجهة الخارجية وحتى الداخلية. ارتبط المبنى بأسلوب المدفعي من خلال معالجات الواجهات الخارجية بأسلوب جديد، حيث التكوينات الثابتة من الخرسانة الي تكسي الوجهات الخارجية للبرجين باعتبارها كاسرات الشمس (Louvers). وتتنوع وتتغير الواجهات الخارجية تبعاً لوضعية هذه التكوينات الخرسانية، وهذا ما يضفي انفرادية المدفعي. (الحسيني، 2017 ، ص53) كما وتتغير المشاهد البصرية للمبنى من خلال التلاعب بالمستوى الفقي المتمثل بالمخططات، حيث لكل طابق هنالك نقطة بارزة للخارج تكون رأس مثل في المنتصف وتتحرك هذه النقطة نحو الداخل كلما صعدنا طابق واحد، اما بالمستوى العمودي المتمثل بالواجهة، فيقل طول ضلعي النقطة البارز كلما صعدنا الى الأعلى. وهذا اضفى الدينامية الحركية كلما نظرنا الى المبنى من زوايا مختلفة ليعطي مشهداً متغيراً. (الشلبي ، 2018 ، ص290)		
صور المبنى	 شكل (3-9-أ) منظور مرسوم من قبل المعماري ساهر القيسي المصدر: (الشلبي ، 2018 ، ص290) مع تعديلات الباحث.	 شكل (3-9-ب) مبنى وزارة المالية، الثمانينيات. المصدر: (الشلبي ، 2018 ، ص290) مع تعديلات الباحث.	
	 شكل (3-10-أ) مدخل مبنى وزارة المالية، استخدام الكوبوند. المصدر: مع تعديلات الباحث.	 شكل (3-10-ب)لقطة توضح استخدام الكوبوند على الواجهات الجانبية فقط. المصدر: مع تعديلات الباحث.	

صور المبنى	 شكل (3-7-أ) منظور عام للمبنى المصدر: قسم المشاريع والاعمار – جامعة بغداد، مع تعديلات الباحث.	 شكل (3-7-ب) الواجهة الخارجية من الجانب الأيمن للمبنى اثناء التنفيذ المصدر: الفنان وعد عدنان (أحد العاملين في المبنى)، تم مسحها من قبل الباحث.
	 شكل (3-8-أ) مبنى مركز بحوث ومتحف التاريخ الطبيعي حالياً – بهو المدخل المصدر: الباحث2023.	 شكل (3-8-ب) مبنى مركز بحوث ومتحف التاريخ الطبيعي حالياً المصدر: الباحث 2023.

- Appendix (C-10): Table (9)

Paragraph	*Strongly agree*	*Agree*	*rather*	*disagree*	*strongly disagree*	*Paragraph points*	*Paragraph evaluation*	*standard deviation*	percentage
X1-D	13	8	4	0	0	109	4.36	Strongly agree (4.20-5)	87.2%
X2-D	12	8	4	1	0	106	4.24	Strongly agree (4.20-5)	84.8%
X3-D	9	6	9	1	0	98	3.92	agree (3.40-4.19)	78.4%
X4-D	7	5	9	4	0	90	3.6	agree (3.40-4.19)	72%
X5-D	7	9	7	2	0	96	3.84	agree (3.40-4.19)	76.8%

- Appendix (C-11): Table (10)

Paragraph	*Strongly agree*	*Agree*	*rather*	*disagree*	*strongly disagree*	*Paragraph points*	*Paragraph evaluation*	*standard deviation*	percentage
X1-E	15	8	2	0	0	113	4.52	Strongly agree (4.20-5)	90.4%
X2-E	17	6	2	0	0	115	4.6	Strongly agree (4.20-5)	92%
X3-E	14	7	4	0	0	110	4.4	Strongly agree (4.20-5)	88%
X4-E	12	6	6	1	0	104	4.16	agree (3.40-4.19)	83.2%
X1-E	9	7	7	2	0	98	3.92	agree (3.40-4.19)	78.4%